

sion of its cells, by which means the epidermis itself ceases to exist as such.

Consequently the outermost layer of cells on the surface (of a root-envelope consisting of several layers of cells) is not the epidermis, but is to be regarded, from its mode of production, as equivalent to all the other layers. The cells of this layer may grow out into radical hairs in all plants, but these are frequently produced only when the roots adhere to foreign bodies. The hairs are often ramified and variously thickened, and may be unrolled, in many plants, in spiral bands.

In every root-envelope many cells are perforated when old. This may be proved anatomically in many cases, and may always be demonstrated by injection with insoluble colouring-matters.

The layer of cells situated beneath the root-envelope, and called the "endodermis" by Oudemans, cannot, in accordance with its developmental history, be regarded as epidermis. Fissure-like orifices are never seen in it; and when such have been supposed to be seen, this depends upon an illusion produced by the section. The endodermis is present in the aërial roots of all Orchideæ, and never lies on the surface. It always consists of two kinds of cells—namely, elongated cells the outer walls of which at least are thickened, and shorter cells which are always thin-walled. The latter always have a remarkably large nucleus; the walls of the cells of the root-envelope adjacent to them are usually thickened in a different manner from those which cover the elongated cells of the endodermis. When the root-envelopes consist of but few series of cells, there is over these a group of variously formed cells which may be described as covering-cells (*Deckzellen*).

The cortical parenchyma, the thickened ring, and the medulla present peculiarities in the mode of thickening of their cells which we do not meet with in the aërial roots of plants of other families.

The aërial roots of many Aroïdæ likewise possess a root-envelope agreeing precisely, both in structure and development, with that occurring in the Orchideæ. The aërial roots of the Cactææ, on the contrary, are destitute of a root-envelope.—*Bericht der Akad. der Wiss. zu Wien*, May 12, 1864, p. 87.

Description of a new Mustela from Quito.

By Dr. J. E. GRAY, F.R.S. &c.

Mr. Gould has transferred to the British Museum the skin of a small *Mustela*, received from Quito, which is very distinct from any we have previously seen. It is about the size of the European Weasel.

MUSTELA AUREOVENTRIS.

Dark brown; chin and side of the throat white; throat, chest, inside of fore legs, and belly golden yellow; whiskers black; tail rather tapering, as long as the body; the soles of the hind feet hairy; the pad of the toes bald, callous, hairy on the sides; ears rounded, hairy. Length of body and head 6 inches, of tail $4\frac{1}{4}$ inches.

Hab. Ecuador.—*Proc. Zool. Soc.* Feb. 9, 1864.